**IT Applications Unit 3, AOS 1, Online Communities**

Complete the following, from pgs, 32: **Network security**

**Networks are classified according to below and we will study the following:**

* Network Categories: LAN, WAN
* Network Architecture, client-server; peer-to-peer; internet peer-to-peer; intranet
* Network communication standards
* Network hardware and software
* Transmission media

**Network security**

1. **What types of physical security measures can be put in place?**

Physical security measures such as locks and alarms can be installed to warn off intrudes.

**Usernames and passwords**

1. **Recommend a password strategy that an organisation could use to avoid unauthorised access to the network.**

An organisation should have individual usernames passwords for all employees. The usernames should be easy to remember but not predictable. Passwords should be set by the user and not be shared with others. The password should be at least eight characters long and incorporate both alphabetic characters and numbers. Like the username a users password should not be predictable, e.g. pet’s name. For extra security measures, users could change passwords on a regular basis without allowing repetition.

**Firewall**

1. **Describe the nature of a firewall**

A firewall is a server and software combination that filters information coming through an internet connection.

1. **What are the main purposes of firewalls and how are these purposes achieved?**

* examining the IP address of computers that request information from an internal server
* blocking all access to certain domain names
* banning certain protocols from accessing particular servers
* certain words and/or phrases incorporated in packets of information
* restrict employee’s access to sensitive information

1. **Why do firewalls use two separate NICs?**

Most firewalls use two separate NIC’s as one is used to connect to the internal network and the second to connect to the outside world.

**Malware protection**

1. **What is malware and what strategies are used to protect against this type of software?**

Malware refers to malicious software such as spyware and adware, cookies that track internet sites a user visits. Trojan horses, which can leave you computer open to read your personal information by creating backdoor access to your system. Worms and viruses can hijack your system and send emails to multiply users and other mischief. Virus protection software, firewalls and anti-adware programs should be installed.

**Encryption**

1. **What is encryption?**

Encryption is the process of translating data into a secret code that can only be decrypted and read by authorised users.

1. **Describe the nature of WPA or WPA2**

Wi-Fi protected access is a security protocol for use by wireless LANs. It provides security by encrypting data sent over radio waves so that it is protected during transmission from the sending device to the receiving device. WPA is designed to provide the same level of security to the wireless environment as a wire network.

1. **What is encrypted data known as?**

Unencrypted data is known as plaintext while encrypted data is known as cipher text.

**Secure Websites**

1. **Describe the secure protocol to allow secure financial transactions across the internet**

To allow secure financial transactions across the internet the hypertext transfer protocol security (https) is used.

1. **What is digital identification certificate technology based on?**

Digital identification certificate technology is based on a trusted certificate authority such as VeriSign Incorporated.

1. **Describe the nature of Secure Sockets Layer (SSL) Protocol**

Secure sockets layer is a cryptographic protocol that provides secure connection to the internet.

**Physical design of networks**

1. **What is the role of a network diagram?**

A network diagram is schematic method of showing the physical devices and communication lines present in a network. The diagrams use straight lines to represent cables and icons are used for communication devices.